

Appl. No.: 09/246,603
Amdt dated December 30, 2003
Reply to Office Action of 08/05/2003

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 1-29, without prejudice, and add new claims 30-58 as follows:

Listing of Claims:

1. (Canceled) A device for locating inflamed plaque on a vessel wall of a vessel of a patient, the device comprising:

at least one receiver insertable into the vessel, the receiver being adapted to receive information from the patient;

a positioner for selectively positioning the at least one receiver in the vessel; and

a sensor for receiving the information from the receiver and determining the presence of inflamed plaque based upon the information received from the receiver.
2. (Canceled) The device of claim 1 comprising a plurality of receivers, the receivers being positioned substantially circumferential around the positioner.
3. (Canceled) The device of claim 1 wherein the positioner positions the receiver near the vessel wall of the patient.
4. (Canceled) The device of claim 1 wherein the receiver receives infrared radiation from the vessel wall.
5. (Canceled) The device of claim 1 wherein the positioner includes a positioning guidewire having a movable section which is adapted to be maneuvered in the vessel so that the movable section can be positioned near the vessel wall in the vessel, and the at least one receiver is attached to the guidewire near the movable section.

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6. (Canceled) The device of claim 1 wherein the receiver includes a luminescent material which is positioned proximate to the vessel wall by the positioner and the sensor receives information regarding the emissions from the luminescent material.

7. (Canceled) The device of claim 1 wherein the receiver is adapted to receive sound waves from the vessel wall and the sensor utilizes the information regarding the sound waves to determine the presence of inflamed plaque.

8. (Canceled) The device of claim 1 wherein the sensor monitors temperature at the at least one receiver to determine the presence of inflamed plaque.

9. (Canceled) A device for measuring temperature in a vessel wall of a vessel of a patient, the device comprising:

at least one receiver, insertable into the vessel, for receiving information about the vessel wall;

a positioner for selectively positioning the at least one receiver proximate the vessel wall; and

a sensor for receiving the information from the at least one receiver and determining temperature at the at least one receiver based upon the information received.

10. (Canceled) The device of claim 9 comprising a plurality of receivers, the receivers being positioned substantially circumferential around the positioner.

11. (Canceled) The device of claim 9 wherein the positioner positions the receiver near the vessel wall of the patient.

12. (Canceled) The device of claim 9 wherein the positioner includes a positioning guidewire having a movable section which is adapted to be maneuvered in the vessel so that the movable section can be positioned near the vessel wall in the

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vessel, and the at least one receiver is attached to the guidewire near the movable section.

13. (Canceled) The device of claim 9 wherein the receiver includes a luminescent material which is positioned proximate to the vessel wall by the positioner and the sensor receives information regarding the emissions from the luminescent material.

14. (Canceled) The device of claim 9 wherein the receiver receives sound waves from the vessel wall and the sensor utilizes the information regarding the sound waves to determine the temperature.

15. (Canceled) The device of claim 9 wherein the sensor monitors the temperature at the at least one receiver to determine the presence of inflamed plaque.

16. (Canceled) A method for determining a temperature at a vessel wall of an vessel, the method comprising the steps of:

providing a receiver insertable into the vessel, the receiver being adapted to receive information regarding the vessel wall;

advancing a receiver in the vessel;

transferring the information from the receiver to a sensor; and

determining the temperature of the vessel wall at the receiver with the sensor.

17. (Canceled) The method of claim 16 wherein the step of providing a receiver includes providing a plurality of receivers, the receivers being positioned substantially circumferential around a positioner.

18. (Canceled) The method of claim 16 including the step of positioning the receiver near the vessel wall of the patient.

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19. (Canceled) The method of claim 16 wherein the step of advancing the receiver includes the step of using a positioning guidewire having a movable section which is adapted to be maneuvered in the vessel so that the movable section can be positioned near the vessel wall in the vessel.

20. (Canceled) The method of claim 16 wherein the step of providing a receiver includes the step of providing a luminescent material adapted for positioning in the vessel.

21. (Canceled) The method of claim 16 wherein the step of providing a receiver includes the step of providing a receiver adapted for receiving sound waves in the vessel.

22. (Canceled) The method of claim 16 including the step of determining the presence of inflamed plaque with the sensor.

23. (Canceled) A method for locating inflamed plaque on a vessel wall of a vessel of a patient, the method comprising the steps of:

providing a receiver, the receiver being adapted to receive information about the patient;

selectively positioning the receiver in the vessel; and

determining the presence of inflamed plaque based upon the information received from the receiver.

24. (Canceled) The method of claim 23 wherein the step of providing a receiver includes providing a plurality of receivers, the receivers being positioned substantially circumferential around a positioner.

25. (Canceled) The method of claim 23 including the step of positioning the receiver near the vessel wall of the patient.

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26. (Canceled) The method of claim 23 wherein the step of positioning the receiver includes the step of using a positioning guidewire having a movable section which is adapted to be maneuvered in the vessel so that the movable section can be positioned near the vessel wall in the vessel.

27. (Canceled) The method of claim 23 wherein the step of providing a receiver includes the step of providing a luminescent material adapted for positioning in the vessel.

28. (Canceled) The method of claim 23 wherein the step of providing a receiver includes the step of providing a receiver adapted for receiving sound waves in the vessel.

29. (Canceled) The method of claim 23 including the step of collecting infrared radiation with the receiver.

30. (New) A device for locating inflamed plaque on a vessel wall of a vessel of a patient, the device comprising:

a flexible guidewire having a moveable section;

at least one receiver attached to said moveable section of said guidewire, said receiver configured to receive information from the patient; and

a sensor configured to receive the information from said at least one receiver and to determine the presence of inflamed plaque based upon the information received from said at least one receiver.

31. (New) The device of claim 30 wherein said moveable section of said guidewire is configured to be maneuvered in the vessel to position the movable section near the vessel wall in the vessel.

32. (New) The device of claim 30 wherein said sensor monitors temperature at said at least one receiver to determine the presence of inflamed plaque.

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33. (New) The device of claim 30 wherein said at least one receiver is configured to receive sound waves from the vessel wall and said sensor utilizes the information regarding the sound waves to determine the presence of inflamed plaque.

34. (New) The device of claim 30 wherein said guidewire has a distal end and said moveable section is at said distal end of said guidewire.

35. (New) The device of claim 30 wherein said movable section comprises a bend in said guidewire.

36. (New) The device of claim 35 wherein said guidewire has a proximal end and said proximal end is capable of being torqued to bring said moveable section near or in contact with the patent vessel.

37. (New) The device of claim 30 wherein each of said receivers comprises a carrier to transfer information from said receiver to said sensor.

38. (New) The device of claim 37 wherein each of said carriers comprises an optical fiber.

39. (New) The device of claim 37 wherein each of said carriers can transfer infrared radiation to said sensor.

40. (New) The device of claim 37 wherein said guidewire has a central lumen therethrough and each of said carriers extends through said central lumen.

41. (New) The device of claim 30 comprising a plurality of receivers attached to said guidewire.

42. (New) A device for locating inflamed plaque on a vessel wall of a vessel of a patient, the device comprising:

a flexible guidewire;

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at least one receiver attached to said guidewire, said receiver configured to receive thermal information from the patient; and

a sensor configured to receive the information from said at least one receiver and to determine the presence of inflamed plaque based upon the thermal information received from said at least one receiver.

43. (New) The device of claim 42 wherein said guidewire comprises a moveable section which is configured to be maneuvered in the vessel and to positioned near the vessel wall in the vessel.

44. (New) The device of claim 43 wherein said guidewire has a distal end and said moveable section is at said distal end of said guidewire.

45. (New) The device of claim 43 wherein said movable section comprises a bend in said guidewire.

46. (New) The device of claim 43 wherein said guidewire has a proximal end and said proximal end is capable of being torqued to bring said moveable section near or in contact with the patent vessel.

47. (New) The device of claim 42 wherein each of said receivers comprises a carrier to transfer information from said receiver to said sensor.

48. (New) The device of claim 47 wherein each of said carriers can transfer infrared radiation to said sensor.

49. (New) The device of claim 47 wherein said guidewire has a central lumen therethrough and each of said carriers extends through said central lumen.

50. (New) The device of claim 42 comprising a plurality of receivers attached to said guidewire.

51. (New) A method for determining a temperature at a vessel wall of an vessel, the method comprising the steps of:

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providing a guidewire insertable into the vessel, said guidewire configured to receive information regarding the vessel wall;

advancing said guidewire into the vessel;

transferring the information from the receiver to a sensor; and

determining the temperature of the vessel wall at the receiver with the sensor.

52. (New) The method of claim 51 wherein said guidewire has a movable section which is adapted to be maneuvered in the vessel so that the movable section can be positioned near the vessel wall in the vessel.

53. (New) The method of claim 51 including the step of determining the presence of inflamed plaque with the sensor.

54. (New) The method of claim 51 wherein the step of providing a guidewire includes the step of providing a guidewire configured for receiving sound waves in the vessel.

55. (New) A method for locating inflamed plaque on a vessel wall of a vessel of a patient, the method comprising the steps of:

providing a guidewire, said guidewire being configured to receive information about the patient;

selectively positioning said guidewire in the vessel; and

determining the presence of inflamed plaque based upon the information received from the receiver.

56. (New) The method of claim 55 including the step of positioning the receiver near the vessel wall of the patient.

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57. (New) The method of claim 55 wherein the step of positioning the guidewire includes the step of using a guidewire having a movable section which is configured to be maneuvered in the vessel so that said movable section can be positioned near the vessel wall in the vessel.

58. (New) The method of claim 55 wherein the step of providing a receiver includes the step of providing a receiver adapted for receiving sound waves in the vessel.